FEDERAL SIGNAL CORPORATION

Informer Series
Tone Alert Receiver

Installation and Operation Manual

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Part No. 255334D
7/2011

IMPORTANT SAFETY NOTICES

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions.

- Read and Follow Instructions - All the safety and operating instructions should be read before the TAR is operated. Follow all installation, operating, and use instructions.

- Retain Instructions - The safety and operating instructions should be retained for future reference.

- Heed Warnings - All warnings on the TAR and in the operating instructions should be adhered to.

- Installation, Placement and Testing – Proper installation, placement and testing is required to ensure the unit is able to perform as intended. Installation, placement and testing should only be performed after the installer has read and understood this manual. All applicable electrical codes must be followed.

- Water and Moisture - The TAR should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, rain or similar environments.

- Wall Mounting - The TAR should be mounted to a wall only as specified in this instruction manual.

- Heat - The TAR should be situated away from heat sources such as radiators, heat registers, stoves, or other accessories that produce heat.

- Power Source - The TAR should be connected to a 9 VDC, 500 mA., Class 2 wall transformer as provided with the unit. Contact your authorized service center if a replacement is required.

- Power-Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs.

- Accessories – Do not exceed maximum accessory relay output rating of 30 VDC, 5 Amps.

- Cleaning - The TAR should be cleaned with a non-abrasive cleaner and a damp cloth. Do not apply solvents directly onto the TAR.

- Power Lines - An outdoor antenna should be located away from power lines.

- Outdoor Antenna Grounding - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to the antenna-discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

- Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

- Acoustic Output – The sound output of the TAR may cause hearing damage if the TAR is activated too close to the user. Always keep the TAR at least six inches away from a listener's ears whenever the TAR power LED is on or blinking.

- Damage Requiring Service - The TAR should be serviced by qualified service personnel when:
  1. The power-supply cord has been damaged; or
  2. Objects have fallen, or liquid has been spilled into the TAR; or
  3. The TAR has been exposed to rain; or
  4. The TAR does not appear to operate normally or exhibits a marked change in performance; or
  5. The TAR has been dropped, or the enclosure damaged.

- User servicing should be limited to battery replacement. All other servicing should be referred to qualified service personnel. Always test the TAR before using after repairs have been made.

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SECTION I
SPECIFICATIONS

1-1 Electrical

- **Antenna Impedance** 50 Ohms
- **Antenna Type** Rubber duck with swivel BNC connector

25 / 30kHz Bandwidth receivers

Frequency Range (MHz)	**30 – 50**	**150 – 170**	**450 - 470**
Intermodulation Rejection per EIA-603, part 4.1.9	≥ -70	≥ -75	≥ -70
Adjacent Channel Selectivity per EIA-603, part 4.1.6	≥ -75	≥ -75	≥ -70
Spurious Response & Image Rejection (dBm) per EIA-603, part 4.1.8	≥ -75	≥ -80	≥ -75
Frequency spread allowable without re-tuning (MHz)	30 – 50	150-170	450-470

12.5 kHz Bandwidth receivers

Frequency Range (MHz)	**30 – 50**	**150 – 170**	**450 - 470**
Intermodulation Rejection per EIA-603, part 4.1.9	≥ -70	≥ -75	≥ -70
Adjacent Channel Selectivity per EIA-603, part 4.1.6	≥ -70	≥ -70	≥ -65
Spurious Response & Image Rejection (dBm) per EIA-603, part 4.1.8	≥ -70	≥ -75	≥ -70
Frequency spread allowable without re-tuning (MHz)	30 – 50	150-170	450-470

- **Sensitivity – 12 dB SINAD** ≤ .35 μ for 12 dB SINAD per EIA-603, part 4.1.4
- **Decode Sensitivity** ≤ 0.5 μV
- **Operating Current** < 100 mA. Standby
  <400 mA. Max.

- **Battery Capacity** — Internal sealed Lead-Acid, capable of running for 6 hours in standby mode w/ 15 minutes of each hour generating siren beep audio at rated audio output, (Based on Pulsed Tone audio).
  Low voltage cutoff set to 5.38 VDC +/- 0.1 VDC.

- **Operating Voltage** — 8 to 15 VDC, Unit supplied with a 9 VDC, 500 mA power supply with a 120 VAC, 60 Hz primary Center terminal is positive (+) on the DC connector.

- **Hum and Noise** — -37 dB when unsquelched, -57 dB squelched relative to full quieting signal w/ 1 kHz tone @ 60% rated system deviation @ rated audio out per EIA-603, part 4.1.11

- **Audio Output** — 1 Watt into 8 Ohms

- **Audio Distortion** — < 5% @ 85 dB output, w/1 kHz tone.

- **Audio Sensitivity** — ≤ 30% of rated system deviation, minimum deviation to produce 85 dB audio output level w/ volume control @ full per EIA-603, part 4.1.1.7)

1-2 Acoustic

- **Message Audio Output** — Message Audio variable from 50 dBA to 85 dBA @ 10’ from the speaker on axis
  User cannot disable Alert or message audio.

- **Alert Beep Audio** — Steady Tone = 1000 Hz
  Pulsing Tone = 1000 Hz pulsed 100ms ON, 100 ms OFF
  Alternating Tone (Hi-Lo) = Alternating between 1000 Hz and 500 Hz tones. Each pulse lasts 100 ms.
  Sweeping Tone (Warble) = 500 Hz rapidly ramped to 1000 Hz
  Overall lengths are programmable.
  Alert Beep Audio fixed @ 85 dBA min. (not adjustable) @10’ from speaker.

1-3 Dual Relay and 600 Ohm Audio Output (IO Option)

Two SPDT Relay Outputs,
5 Amps @ 30 VDC

Relay outputs can be programmed to cycle on & off, or come on continuously with the on-time, off-time, and total-time being programmable.

Once activated, the relay outputs can be programmed to be reset manually, reset after a programmable number of seconds or reset after a programmable number seconds after the carrier drops.

The 600 Ohm audio output will respond as the speaker does, coming on with the speaker and being reset or shutting off with the speaker. Its output level is adjustable from 0 to 2.5 V_{p-p} into 600 Ohms w/ 1 kHz tone @ 60% rated system deviation.

1-4 Signaling Formats

- **Number of codes** — Up to 6 programmable activation codes max.

- **Two-Tone Sequential & Single Tone** — 300 Hz - 3000 Hz
  for 25 / 30 kHz receivers
  300 Hz - 2300 Hz
  for 12.5 kHz receivers
  tolerance +/-1.5%
  Minimum tone spacing = 5%
  Minimum “A” tone length = .5 sec
  minimum “B” tone length = .25 sec minimum.
  8 sec. maximum for all tones

- **Decode Sensitivity DTMF** — </=20 dB SINAD
  1 - 12 digits maximum,
  minimum character length = 50 ms. (35 ms as special)
  Characters plus inter-character spacing not to exceed 1000 ms.

- **Decode Sensitivity with Optional MSK Decoder** — </= 20 dB SINAD
  1200,N,8,1, Synchronous
  1200 Hz mark tone, 1800 Hz space tone.

- **EAS Decode Sensitivity with Optional EAS/SAME Decoder** </= 20 dB SINAD.
  520.83 (6250/12) bits per second, 2083.3 Hz Mark tone. 1562.5 Hz Space tone, no Start, Stop, or Parity bits. 7 bit ASCII, + 8th null bit (either 1 or 0), LSB sent first

- **CTCSS/CDCSS (PL) Decode Sensitivity** </= 12 dB SINAD

  A different PL code can be programmed for each RF frequency.
  Decodes with Two-Tone codes >/= 400 Hz only.
  Tone Frequency Range 36.6 to 254.1 Hz
  Tone Accuracy > .05 Hz
  Tone Decode Bandwidth +/- 1.1%
  Digital, Golay (23,12) 23 bit digital word
  Digital Data Rate 134.4 Hz nominal
  Decode Turn on Time < 250 ms.
  Decode Turn off Time < 1.2 s.
  Number of codes 60 - Tone, 83 Digital

1-5 Environmental

- **Temp Range** -30 to +60 °C.
- **Humidity Range** 0 - 98%, non-condensing

1-6 Physical

- **Size** 3.325” x 8.69”x 5.0”(HxWxD)
- **Weight** 2.5 lbs.
- **Color** PANTONE 421U
- **Material** Textured ABS Plastic

1-7 EMI / RFI

FC Complies with FCC Title 47, Part 15

1-8 Agency Compliance

Complies with UL 1270

SECTION II
GENERAL DESCRIPTION

2-1 General Description

The Federal Signal Informer Tone Alert Receiver (TAR) is a significant innovation in emergency alerting. The TAR is the first unit of its type available in all commercial FM bands from 30 - 470 MHz and can be programmed for wide or narrow band applications. It is also the first TAR capable of decoding multiple formats (single-tone, two-tone, DTMF and optionally EAS or Federal Digital) at the same time. These features enable the Informer to be easily integrated into virtually any new or existing warning system.

The TAR is a robust radio receiver with a loud speaker output designed specifically for warning applications. The unit can be wall mounted or sit on a desktop and comes with an attached antenna that can be removed for connection to an outside antenna. The TAR has a built-in battery and charger to provide reliable operation even in the event of an AC power failure.

The Informer can be pre-programmed with up to four separate warning tones plus a channel monitor function for live PA announcements. Two optional programmable relay outputs and a 600 Ohm audio output are also available. These outputs can be used to control other equipment such as an optional strobe light for warning the hearing impaired and to tie into external PA systems respectively.

Up to four separate RF channels may be programmed into the TAR. The channels are easily selected from the built in membrane keypad. Each of the RF frequencies must be within the allowable frequency spread for the RF band being used (see specifications section above).

The Informer is completely programmable over a built in RS232 port from an easy to use Windows XP/Vista/7® based software program. All data is stored in non-volatile FLASH and EE memory. Using this technology, both the application software and the user specific configuration data can be updated over the serial port without the need to disassemble the unit and burn IC chips.

The Informer series receivers meet all requirements defined by the Federal Emergency Management Agency for the CSEPP programs.

2-2 Standard Features

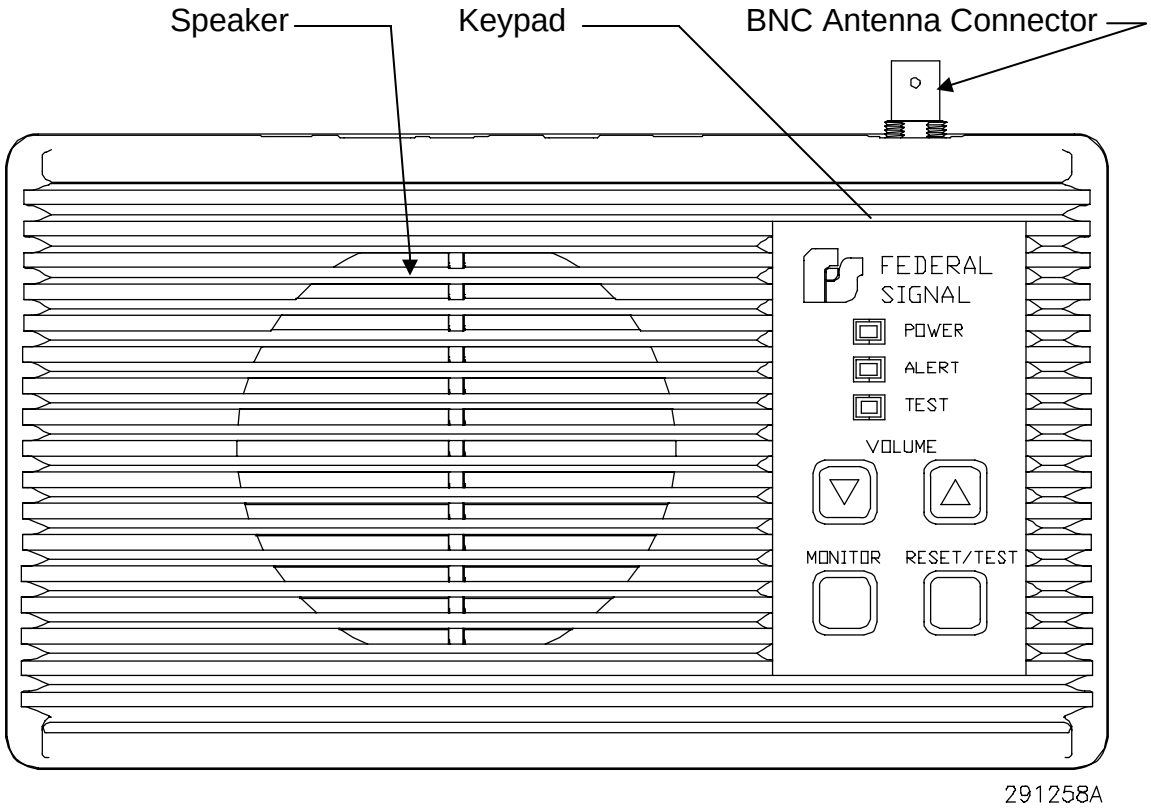
- Available in 5 frequency bands from 30 MHz to 470 MHz
- Long life rechargeable battery with built-in charger
- Wide temperature operating range
- Excellent RF sensitivity, and selectivity
- Fully programmable RF - No tuning required
- Clean, low distortion of recovered audio
- Loud +85 dBA output at 10’
- Signal to Noise based squelch circuit, does not open receiver in high radio noise environments i.e., near computers etc.
- Programmable for wide or narrow band.
- Programmable RF, Single Tone, Two-Tone, DTMF, CTCSS, and CDCSS (DPL) decoding
- Re-programmable over RS232 port without removing IC chips
- Volume control, monitor and reset buttons with diagnostic LEDs

2-3 Optional Features

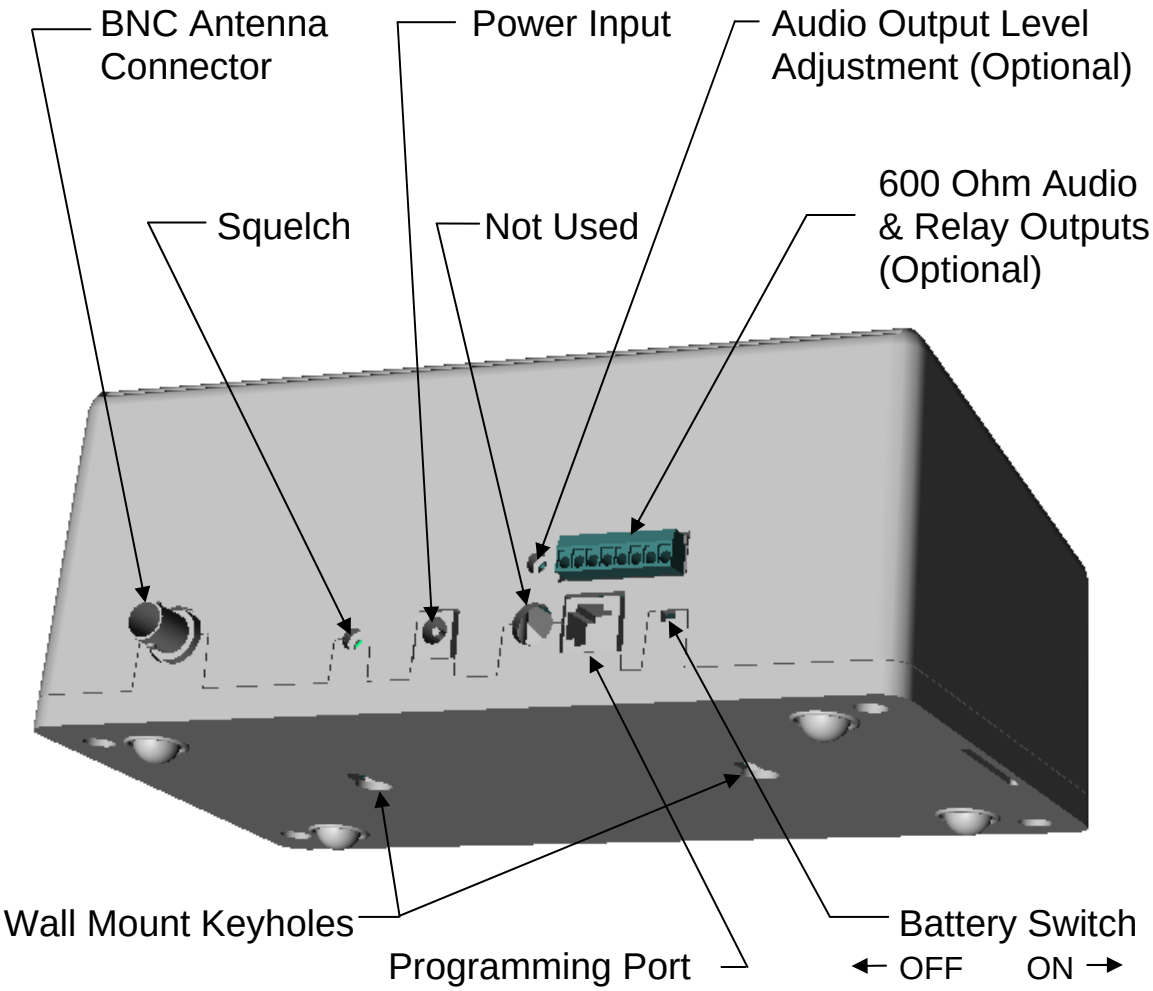
- Programmable MSK decoder compatible with The Federal Commander Digital System.
- Programmable EAS decoder for decoding NOAA radio SAME code alerts.
- 600 Ohm audio output and 2 SPDT relay outputs.
- Windows XP/Vista/7® based programming software
- IS2 and FB2 Strobe Light Accessories

Note: The MSK and EAS decoders are not available simultaneously in the same unit. All other options can be used together.

2-4 Informer Front Panel Layout



2-5 Rear View I/O Definitions



SECTION III
INSTALLATION INSTRUCTIONS

3-1 Warning

Read and adhere to all safety warnings beginning at page “i” of this manual before installing the Informer.

3-2 Determine a Suitable Location

When picking a location for the Informer TAR, first consider the following criteria:

1. The TAR contains a radio receiver that should be placed as far as possible from electrically noisy electronic devices to avoid interference and enable the desired RF signal to be received. Examples of noisy devices may include microwave ovens, motor driven devices, light ballasts, and electrical switching devices.

2. Conductive building materials can block radio waves from reaching the TAR. In some areas, a larger antenna or an external antenna which provides more signal may be required. Radio reception can be monitored by holding down the Monitor button until audio is heard from the speaker (if the monitor function has been programmed into the TAR). The clarity of speech should be monitored to ensure it is clear and intelligible and does not cut in and out. The unit should also be activated from the TAR control station to verify it is programmed correctly and is receiving the control signals.

3. The TAR should be positioned to keep the unit at least six inches away from the listener’s ears to avoid potential hearing damage.

4. The TAR should be placed in an area where the speaker can be heard when the TAR is activated. The level of the warning tone can be checked by holding down the **MONITOR** & **RESET** buttons together until the Alert beeps are heard. If the coverage area is large, multiple TARS’ or external amplifiers and speakers may be required to provide adequate warning.

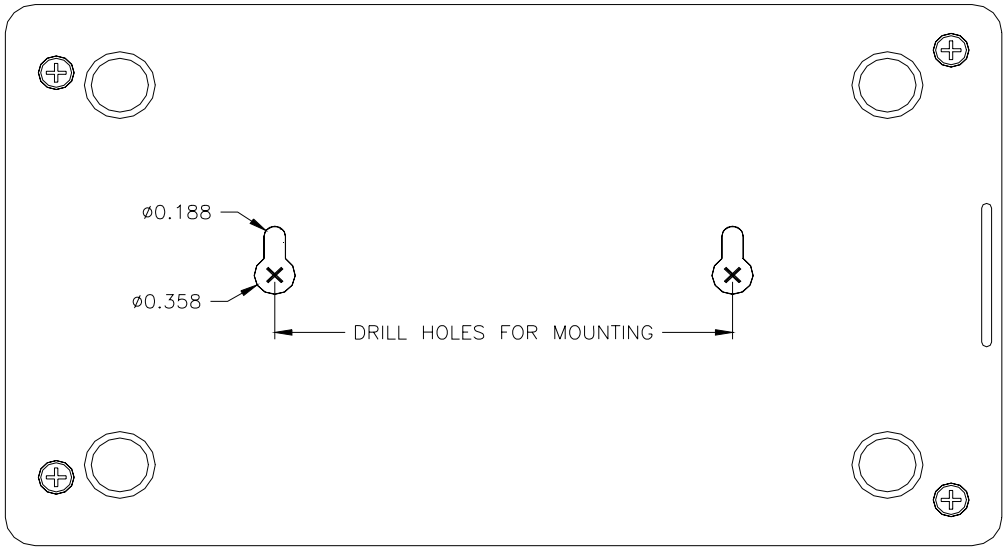
5. The TAR should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool, rain or similar environments.

6. The TAR should be located within six feet of an AC power receptacle to eliminate the need for an extension cord.

7. The TAR should be placed where it will not be inadvertently covered or moved. A permanent wall mounting is recommended after a suitable location has been found.

3-3 Wall Mounting

Wall mounting is the preferred mounting method for the Informer TAR. Before mounting the TAR, determine a suitable location considering the criteria listed above. The TAR has two keyholes located on the bottom of the unit that will accept #8 screws. The mounting screws should be placed horizontally level, approximately 6” above eye level and 4” apart on center. Ensure the screws are placed into material that can adequately support the weight of the TAR. Use a #8 wall anchor when mounting to drywall. Ensure that the screws are tightened sufficiently to securely fasten the TAR against the wall.



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The local rubber antenna should be mounted vertically on top of the TAR (not bent at 90°) such that the antenna is pointed toward the ceiling. If an external antenna is required, it should be installed by a qualified electrician in accordance with local and national electrical codes.

The 9 VDC power supply should be run against the wall and plugged into a 120 VAC, 60 Hz outlet. Plug the low voltage end of the cord into the power jack located at the rear of the TAR. The cord should be routed to ensure it is protected against walking on, tripping over or pinching the cord. Turn the battery switch to the on position (see section 3-7).

3-4 Desk Mounting

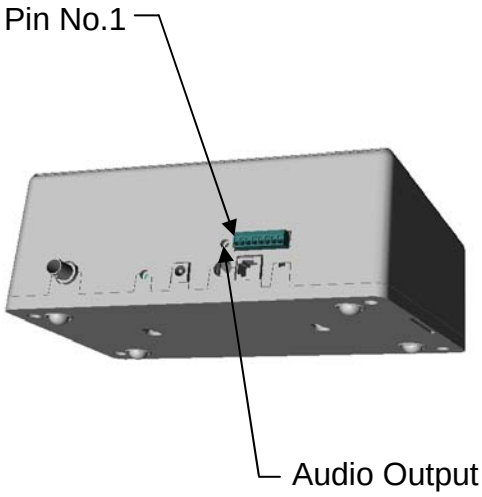
Before putting the TAR in place, determine a suitable location considering the criteria listed above. It is recommended to use the wall mounting method if the optional strobe light accessory is used. The local rubber antenna should be bent at 90° so the antenna points toward the ceiling. If an external antenna is required it should be installed by a qualified electrician in accordance with local and national electrical codes.

The 9 VDC power supply should be run against the wall and plugged into a 120 VAC, 60 Hz outlet. Make sure the cable is protected against walking on, tripping over or pinching the cord. Plug the low voltage end of the cord into the power jack located at the rear of the TAR. Turn the battery switch to the on position (see section 3-7).

3-5 Optional IO Model Connections

Do not exceed the electrical ratings defined in the specifications for the IO option.

If one of the IO models of the Informer is purchased, a 600 Ohm balanced audio output and two SPDT relay outputs are available. A removable 8 position connector is located on the back side of the Informer for making electrical connections. The connector accepts 5mm (3/16”) stripped wire, 18 - 26 AWG.
Make electrical connections to the I/O connector as follows:



PIN	DESCRIPTION
1	Audio Output
2	Audio Output
3	Relay 1 N.O. Contact
4	Relay 1 Common
5	Relay 1 N.C. Contact
6	Relay 2 N.O. Contact
7	Relay 2 Common
8	Relay 2 N.C. Contact

3-6 Strobe Light Installation

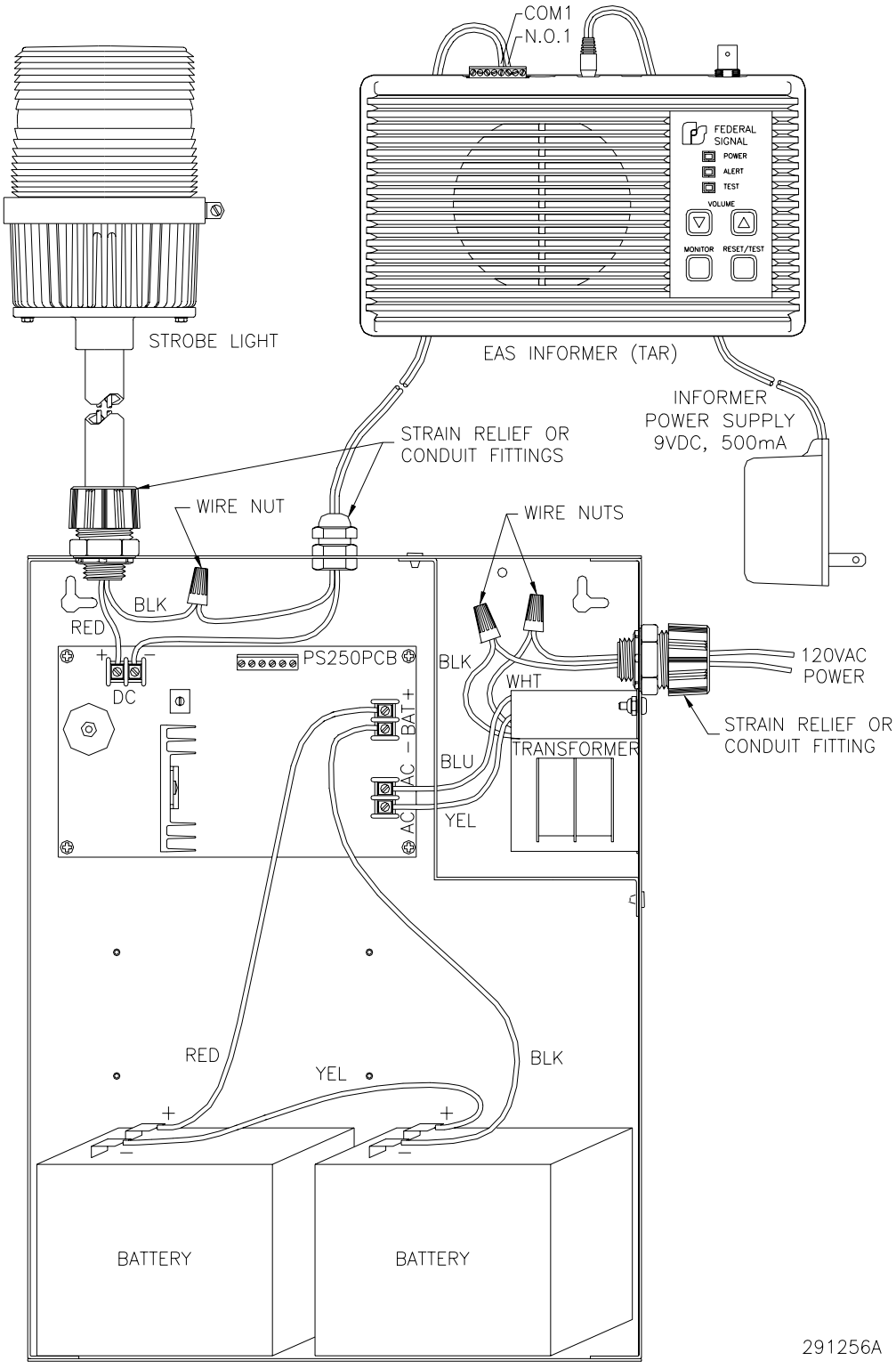
The optional strobe light accessories enable the TAR to provide warning to the hearing impaired and users in high ambient noise areas. To use a strobe light accessory, an IO model of the Informer is required to provide the necessary relay output for controlling the strobe. The strobe light accessory also requires a second 120 VAC, 60 Hz outlet.

This accessory must be installed per local and national electrical codes by a qualified electrician.

3-6-1 Model FB2PST-012-024C Strobe Light Accessory Installation

Install the strobe on the wall near the TAR at least 24” below the ceiling per instructions provided with the unit. Install the model PS250 power supply on the wall near the strobe and TAR per instructions provided with the unit. Make electrical connections to the strobe, power supply and TAR as shown in the following diagram. The connection between the TAR and the strobe requires an 18 AWG two-wire cable with 5 mm (3/16”) stripped wire on the TAR end and 5/16” stripped wire on the other. Make all other connections before connecting power. Connect the batteries first, and then AC power, after all other connections have been made.

Refer to the wiring diagram on the following page.

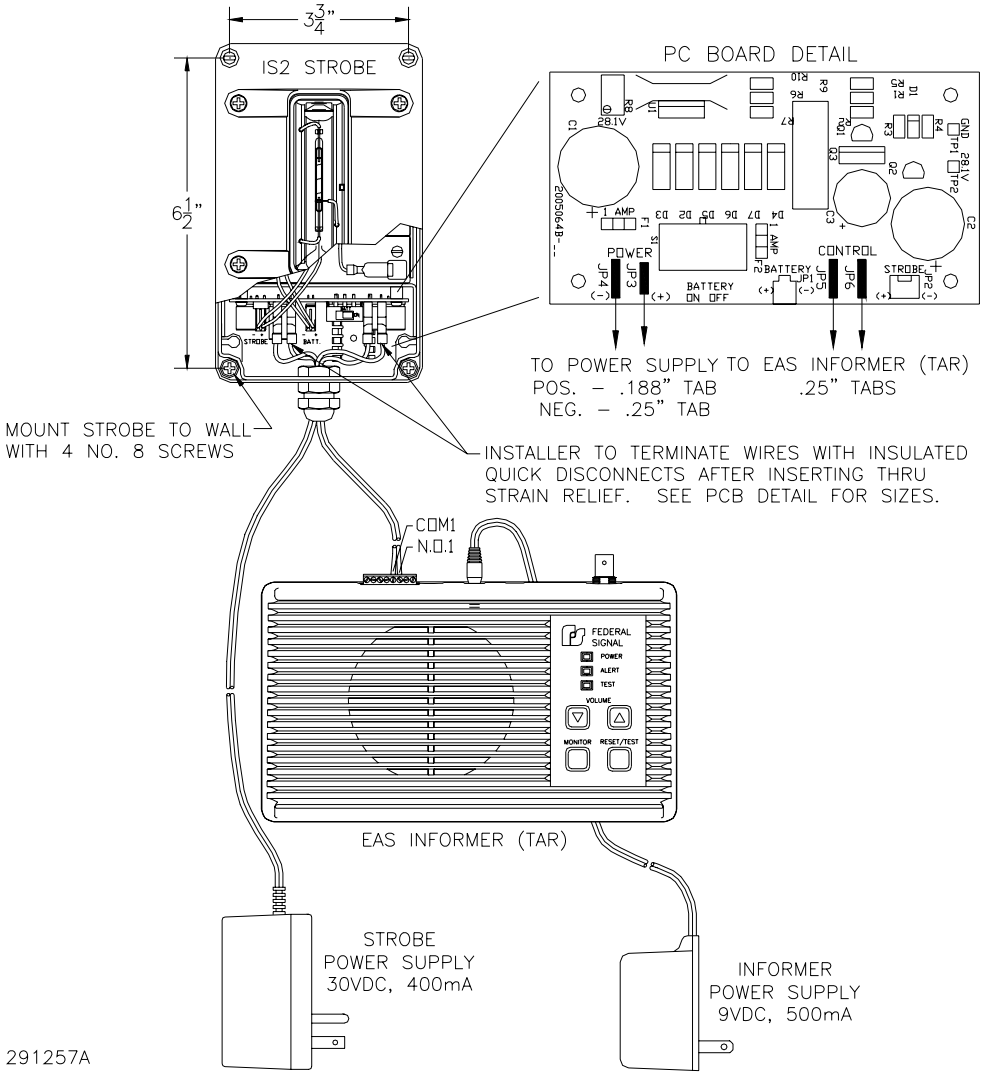


Model FB2PST-012-024C Strobe Light Accessory Wiring Diagram

3-6-2 Model IS2 Strobe Light Accessory Installation

Install the model IS2 strobe vertically, near the TAR, at least 24” below the ceiling. The connection between the TAR and the strobe requires a user supplied 18-20 AWG two-wire cable with 5 mm (3/16”) stripped on the TAR end and ¼” quick connects on the other. The quick connects must be installed after running the wires into the strobe box to enable the wire to pass through the strain relief. There is no polarity for these strobe connections.

Make electrical connections to the strobe, and TAR as shown in the following diagram.



Model IS2 Strobe Light Accessory Wiring Diagram

3-7 Testing

The Informer TAR should be tested after installation to ensure the TAR is able to perform as intended.

The battery has a disconnect switch hidden behind a small opening in the rear of the TAR. The switch is intentionally out of reach to avoid tampering and should not be switched by the end user under normal circumstances. The switch location is shown in section 2-5, Rear View IO Definitions.

The switch can be toggled using a small paperclip or similar device capable of reaching into the switch opening and moving the switch. The switch is on when it is pushed away from the center of the TAR. The switch should not be turned off unless the TAR is being removed from service. After the battery switch is turned on, the TAR must be connected to the 9 VDC power supply to power-up the TAR. To verify the battery switch is on, remove power from the wall transformer from the TAR and verify the power LED begins to flash. If the LED does not flash, check the battery switch position again and retry this test.

Verify the TAR activates for all required functions that have been programmed into the unit. The user should be able to detect the warning tone in the desired coverage area. Voice quality should be verified to ensure speech is intelligible over the TAR speaker. Proper operation of the keypad, LEDs, and battery backup should be verified.

If the optional strobe light is attached, verify strobe operation when the TAR is activated.

A monthly test run only from battery power is recommended. To run this test, remove the power supply from the AC outlet. Hold down the MONITOR and RESET buttons together until the Alert tone is heard and the ALERT and TEST LED's turn on. After the test, the POWER LED should be blinking and the ALERT and TEST LED's should turn off. If the tone is not heard, or if the power LED turns off completely, contact your local service center for repair. If the test runs successfully, reconnect the AC power adaptor and verify the power LED stops blinking and turns on steady.

3-8 Training

The end user(s) should be trained for proper use of this product. Instructions should be placed in the possession of the end user.

SECTION IV
OPERATION INSTRUCTIONS

4-1 General Information

All functions should be pre-programmed into the Informer TAR. Refer to the programming section of this manual if programming changes are required. If you are experiencing any difficulties with the TAR, contact your local Federal Signal service center for assistance.

4-2 Power Supply

Your TAR comes with a power supply that should remain plugged in at all times. When the Informer is plugged in and receiving power, the **POWER** LED will display a steady green light. The TAR also comes with a rechargeable sealed lead acid battery. The battery requires continuous charge in order to maintain its effectiveness. In the event that AC power to the TAR is lost, the green **POWER** LED on the unit will begin to flash to indicate the use of battery power. The TAR cannot be turned off; therefore the unit must remain connected to the power supply to avoid depleting the battery.

The TAR should be connected to a 9 VDC, 500 mA power supply as provided with the unit. Contact your authorized service center if a replacement is required.

Allow the battery to charge for at least 24 hours initially and after a complete discharge before relying on the battery backup feature.

4-3 Monitoring (NOAA Weather Radio and Channel Selection)

The Informer may be programmed to monitor the local NOAA Weather Radio Channel if the VHF version Informer is purchased. The RF frequencies for NOAA radio are as follows: 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz, and 162.550 MHz.

When using the Informer with NOAA radio, the **MONITOR** button should not be disabled in software. Pushing the **MONITOR** button will place the TAR in monitor mode and allow you to begin listening to the NOAA Weather Radio Channel. If multiple RF channels have been programmed into the TAR, the TAR will beep once for each channel number when the **MONITOR** button is pressed. For example, the first time the **MONITOR** button is pressed, the TAR will beep once for channel 1. The second time it is pressed, it will beep twice for channel 2, etc.

The Informer should also be programmed to emit a short tone to alert the user after a valid EAS message is received. The speaker should be programmed to auto, timed or manual reset to enable a voice announcement to be heard.

To discontinue monitoring NOAA Weather Radio and place the unit in standby mode, press the **RESET** button on the TAR. While in standby, the TAR will not be heard but will continue to monitor the selected NOAA radio channel for emergency broadcasts.

For further information pertaining to EAS, consult your local NOAA weather center or the FCC at www.fcc.gov.

4-4 Receiving an Alert Message

Whenever the Informer receives a valid **ALERT** Message, the Red **ALERT** LED will begin to flash unless the **TEST** LED has been programmed to turn on for that message. The TAR may also be programmed to sound one of four tones. The TAR may be programmed to automatically enter Monitor mode to enable the user to hear radio traffic over the TAR. The length of the tone and automatic Monitor mode reset is programmable.

The TAR will receive ALL properly addressed **ALERT** messages sent over the radio whether the TAR is in Monitor mode or standby mode. ***Instructional voice messages typically follow the Alert beeps to provide instructions for related emergencies in your specific area. Users should immediately respond as instructed.***

The TAR will automatically reset and return to standby when the control center sends a **CANCEL** command. The Red **ALERT** and yellow **TEST** LED will also be reset. The use of **CANCEL** should be avoided after an actual **ALERT** so that the user will be able to acknowledge the **ALERT** and **/** or **TEST** LED manually.

New activation commands will over-ride all previous functions in progress. New single-tone or two-tone functions cannot be decoded while a siren tone is being generated by the Informer.

4-5 Receiving a Test Message

If the TAR has been programmed with a **TEST** function, the yellow **TEST** LED will light steady whenever a Test Message has been received. This light will remain on until you press the **RESET** button. The **ALERT** LED will not light for any function programmed to light the **TEST** LED.

4-6 Volume Control

The Informer offers you the ability to control the sound volume of voice messages heard over the TAR speaker. The Alert beep volume is not adjustable. To adjust the volume, first press the **MONITOR** button to listen to the radio channel. Pressing the **VOLUME** ↑ button will increase the sound volume and pressing the **VOLUME** ↓ button will decrease the volume. Holding down either arrow will allow you to "scroll" to the highest or lowest volume levels.

If no audio is heard when the **MONITOR** button is pressed, there may be no radio traffic currently being broadcast. If the **MONITOR** button is held down for over 5 seconds, the radio squelch will be opened and noise will be heard over the speaker if no radio traffic is present. The **RESET** button will return the TAR to standby.

4-7 Tone-Alert Radio Failure

In the event of unit failure, the yellow **TEST** LED light will flash once per second and the TAR will emit a beep every 30 seconds. This failure should be investigated with the local emergency management control station authorities or the local service center.

4-8 Optional Dual Relay and 600 Ohm Audio Output

- **Relay Outputs**

  The Informer comes with an optional pair of relay outputs capable of controlling external devices. The outputs are located at pins 3 - 8 of the removable output connector. Refer to section 2.5 for parts locations.

  Do not exceed the voltage and current ratings listed in the specifications section of this manual. When using this option, the relay outputs will turn on until the programmed default timeout occurs or when the **RESET** button is pressed or a **CANCEL** command is received.

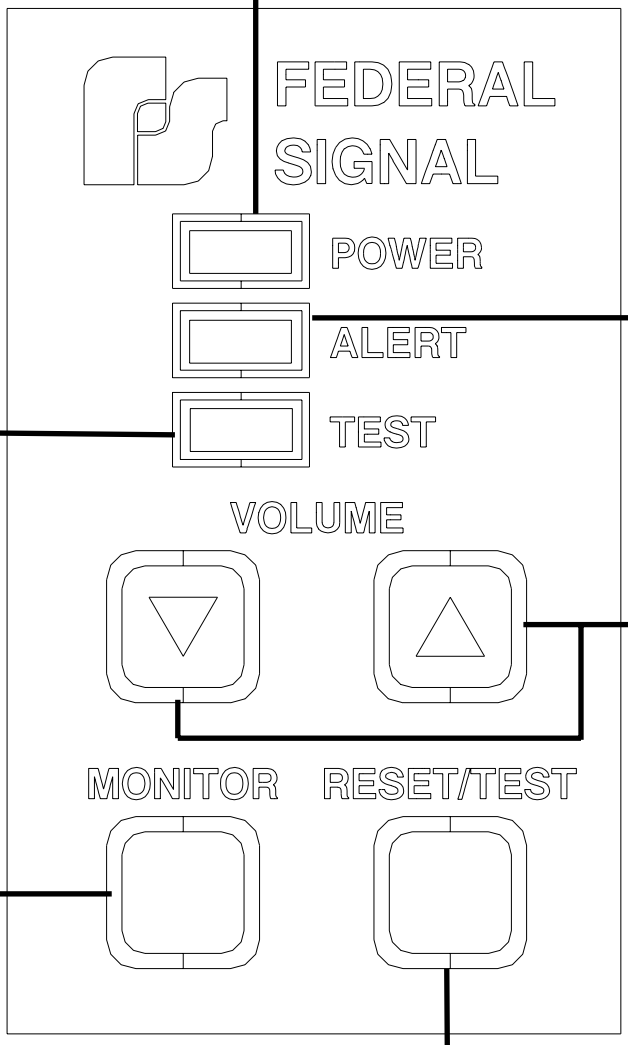
  Note: The relay outputs close for 5-10 ms. when the RESET button is pressed and during initial power-up.

- **600 Ohm Audio Output**

  The 600 Ohm audio output is useful for tying the Informer into existing PA systems or other externally amplified speaker systems. The TAR provides an adjustable balanced audio output at pins 1 & 2 of the output connector. The output level is adjustable via a potentiometer located near the IO connector. Refer to section 2.5 for parts locations.

4-9 Informer Quick Reference Guide

Quick Reference Guide



POWER LED lights steady Green when TAR is receiving power from wall outlet, blinks when using battery power.

TEST LED turns on to inform you that the TAR has received a Test message. The **TEST** LED will stay on until you press the **RESET** button.

In the event that the TAR detects a failure, the **TEST** LED will flash once per second. ***If this occurs, please contact your local distributor or service center for repair.***

Press the **MONITOR** button in order to listen to radio traffic. To return to Standby Mode, push the **RESET** button. Hold down both the **MONITOR** and **RESET/TEST** buttons to emit Alert tone.

ALERT LED flashes Red when TAR receives an Alert Message. The TAR may also give a series of loud beeps and open the channel to provide an alert message. ***You should immediately respond as instructed.*** The **ALERT** LED will continue to flash until you press the **RESET** button below.

The **VOLUME** Control buttons control sound volume for Alert Messages and for NOAA Weather Radio. Push to change or Press and Hold to scroll to highest or lowest volume setting. The sound cannot be turned down completely.

The **RESET/TEST** button is used to take the unit out of monitor mode and place the unit in standby. After an Alert message, press the **RESET** button to turn off the blinking **ALERT** LED.

SECTION V
SERVICE and MAINTENANCE INSTRUCTIONS

5-1 Battery Replacement

The Informer uses a 6 V, 1.2 A/H sealed lead acid battery. The battery should be replaced with the same make and model battery as the original equipment. Typical battery life will range from 3 - 5 years depending on use.

Visit our website for a listing of our approved battery replacements or contact Federal Signal Customer Service at 800-548-7229.

http://www.alertnotification.com/ProductDocumentation_8595.aspx

To replace the battery:

- Remove the power supply from the TAR.
- Place the TAR on a flat table speaker side down.
- Remove the four screws located at the four corners of the TAR.
- Remove the bottom cover of the TAR.
- Pull the battery out of the TAR; be careful not touch the PCB or to pull the battery wires off the PCB.
- Grasp the + battery terminal firmly and remove from the battery.
- Grasp the - battery terminal firmly and remove from the battery.
- Connect the battery terminals to the new battery. Ensure the red wire is connected to the + terminal and the black wire is connected to the – terminal of the battery.
- Place the new battery into the TAR in the same position as the battery just removed.
- Replace the bottom cover and the four screws. Do not over-tighten the mounting screws.
- Plug in the power supply.
- Test the TAR as described in the installation section of this manual.

5-2 Radio Receiver Alignment and Service

Refer to the Informer I-SW manual part number 255335 for alignment instructions. There are no user serviceable parts inside the Informer. Radio alignment and servicing should be referred to an authorized Federal Signal Service center. The Federal Signal Service Dept. can be contacted at: (800) 524-3021 or (708) 534-3400 for further service information.

SECTION VI
Warranty

Limited Warranty

The Signal Division, ***Federal Signal Corporation,*** *warrants each new product to be free from defects in material and workmanship, under normal use and service, for a period of two years (one year for Informer, EAS, and Federal software products) on parts replacement and one year on labor from the date of delivery to the first user-purchaser. Federal Warning Systems warrants every 2001 Siren (Top of pole only) to be free from defects in material, per our standard warranty, under normal use and service for a period of Five years on parts replacement.*

During this warranty period, the obligation of Federal is limited to repairing or replacing, as Federal may elect, any part or parts of such product which after examination by Federal discloses to be defective in material and/or workmanship.

Federal will provide warranty for any unit, which is delivered, transported prepaid, to the Federal factory or designated authorized warranty service center for examination and such examination reveals a defect in material and/or workmanship.

This warranty does not cover travel expenses, the cost of specialized equipment for gaining access to the product, or labor changes for removal and re-installation of the product. The Federal Signal Corporation warranty shall not apply to components or accessories that has a separate warranty by the original manufacturer, such as, but not limited to, batteries.

This warranty does not extend to any unit which has been subjected to abuse, misuse, improper installation or which has been inadequately maintained, nor to units which have problems related to service or modification at any facility other than Federal factory or authorized warranty service centers.

THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL FEDERAL BE LIABLE FOR ANY LOSS OF PROFITS OR ANY INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY SUCH DEFECT IN MATERIAL WORKMANSHIP.

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